

## THE *SUNORFA* OF AUSTRALIA (COLEOPTERA: PSELAPHIDAE)

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### Abstract

The Oriental genus *Sunorfa* Raffray is now known from Australia. It is compared with the other Australian member of the Tanypleurini, *Gnesion* Raffray, and two new species, *testacea* and *nigripes*, are described from northern Queensland.

### Introduction

*Sunorfa* Raffray (1882) is widely distributed through the Oriental region. The subgenus *Sunorfoides* Raffray (1913) is restricted to the Seychelles, with the nominate subgenus known from Sri Lanka (Jeannel 1961) to the Fiji Islands (Park 1952). Despite the apparent centre of diversity being New Guinea, where 16 of the 24 known species are found, members of the genus have never been recorded from Australia. Two species belonging to this genus were recently collected in northern Queensland, and are different from the previously described species based on the figures and descriptions of Raffray (1903). These two species are here described as new.

*Sunorfa* is placed in the Tanypleurini, whose members are known entirely from the Gondwanaland continents. The only tanypleurine hitherto known from Australia is *Gnesion rufulum* Raffray (1900), described without any further indication of locality. *Gnesion* is similar in appearance to *Sunorfa*, but possesses dentate elytral humeri, two basal elytral foveae, and a distinct median fovea in the antebasal transverse sulcus of the pronotum. The elytra of *Sunorfa* lack dentate humeri, bear three basal foveae, and the pronotum lacks a median fovea in the antebasal transverse sulcus.

*Sunorfa* is characterized as follows: head with vertexal foveae, eleven antennomeres, antennal club formed by last three segments with antennomeres IX and X only slightly enlarged, eyes large; pronotum widest near anterior margin, antebasal transverse sulcus distinct between lateral foveae, median fovea lacking, prosternal foveae present, lateral mesosternal foveae present, single median mesosternal fovea, lateral mesocoxal foveae present, single median metasternal fovea; metasternal length equal to distance between metacoxae; elytra with three poorly defined basal foveae, only sutural stria present; abdomen with six visible segments, first segment with inner and outer lateral carinae distinct, of equal length, following segments lacking any trace of lateral margins; males with vertex modified, genitalia with two parameres.

Five paratypes of each new species are in the collection of the author (DSC). The holotypes and remainder of the paratypes are deposited in the

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Australian National Insect Collection (ANIC), CSIRO, Canberra. Illustrations are based on disarticulated cleared specimens on slides, and the features checked by comparison with specimens mounted on points. All measurements are in millimeters.

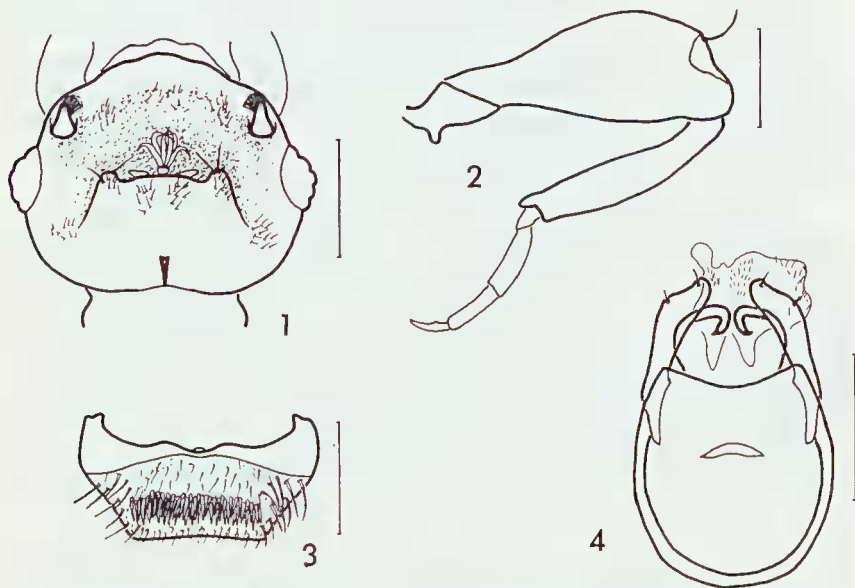
### Key to Australian species

1. Punctures on elytra small, 8-10 punctures in line perpendicular from sutural stria to humeral angle; males with vertex deeply excavated anterior to tuberculate area, pronotum with setose callosities on antero-lateral margins . . . . . *testacea* n. sp.
- Punctures on elytra large, 5-6 punctures in line perpendicular from sutural stria to humeral angle; males with vertex only slightly depressed anterior to median tubercle, pronotum lacking setose callosities . . . . . *nigripes* n. sp.

### *Sunorfa (Sunorfa) testacea* n. sp.

(Figs 1-4)

Length 1.02-1.14. Body yellow to orange-brown; head and prothorax sparsely and lightly punctate; elytra with dense light punctation, 8-10 punctures in line perpendicular from elytral suture to humeri, base with three poorly defined foveae.



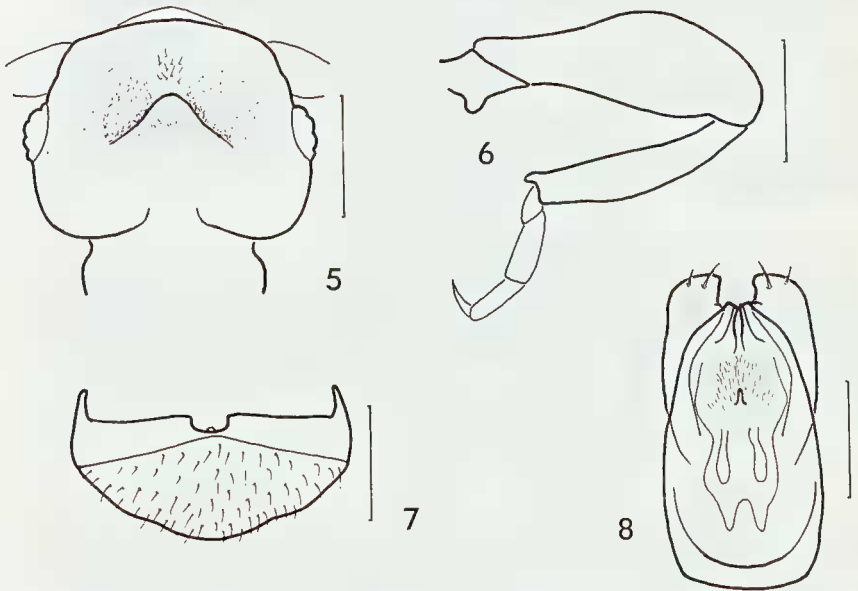
Figs 1-4. *Sunorfa testacea* n. sp., male: (1) dorsal view head; (2) anterior view left middle leg; (3) ventral view sternite VI; (4) dorsal view genitalia. Scale lines equal 0.1 mm.

Males with vertex deeply excavated between eyes, vertex protruding over excavation, median clump of flattened setae projecting dorsally at posterior margin of excavation, anteriorly curved hook originating above antennal bases; pronotum with small setose callosity on antero-lateral margins; mesotrochanters bearing blunt setate tubercle, mesofemora with dorsal circular impression at apex, mesotibiae with broad apical spur; sternite VI medially impressed, broadly truncate at apex, with transverse dense preapical zone of setae in impression. Genitalia with apex bearing two long recurved teeth; parameres apically narrowed.

Females with broad V-shaped impression extending anteriorly from vertexal foveae, area from impression to frons apex smoothly roughened. Lacking modifications of legs, sternite VI bluntly rounded, evenly setate.

*Types.*—HOLOTYPE male: Queensland, Upper Lankelly Creek, near Coen, 11.vi.1971, G. B. Monteith, rainforest (ANIC). PARATYPES: 8 ♂♂, 3 ♀♀, same data as holotype (ANIC, DSC).

*Discussion.*—The lighter colour and small dense elytral punctures will readily separate this species from *nigripes*. The male sexual features of the head, pronotum, and mesofemora, and the deep V-shaped vertexal impression of the female, can also be used to segregate the two species.



Figs 5-8. *Sunorfa nigripes* n. sp., male: (5) dorsal view head; (6) anterior view left middle leg; (7) ventral view sternite VI; (8) dorsal view genitalia. Scale lines equal 0.1 mm.

*Sunorfa (Sunorfa) nigripes* n. sp.

(Figs 5-8)

Length 1.02-1.08. Body red-brown to brown; head and elytra with sparse coarse punctures, elytra with 5-6 punctures in line perpendicular to elytral suture from humeri; pronotum with moderate sparse punctation; elytra with 3 basal foveae same size as elytral punctures.

Males with vertex slightly raised at middle, projecting anteriorly as narrow shelf, area antero-medial to vertexal foveae flattened; mesotrochanters with broad ventral tubercle, mesotibiae with broad apical spur; sternite VI with apex broadly rounded, disc lightly convex, evenly setate. Genitalia with apex narrowly truncate, divided but lacking teeth; parameres broad to apex.

Females with vertex lightly impressed antero-medially from vertexal foveae, impression interrupted at middle; legs lacking modifications, sternite VI similar in form to that of males, not as densely setate.

*Types*.—HOLOTYPE male: Queensland, 16.06S 145.28E, near Cape Tribulation, 50 m, 20.vi.1971, Taylor and Feehan, rainforest, Berleseate ANIC 326 (ANIC). PARATYPES: 1 ♂, 8 ♀♀, same data as holotype (ANIC, DSC); 1 ♂, same data except, 16.06S 145.27E, 21.vi.1971, rainforest, Berleseate ANIC 323 (ANIC); 1 ♀, 16.07S 145.25E, Noah Creek, 50 m, 12.vi.1971, Taylor and Feehan, rainforest, Berleseate ANIC 321 (ANIC); 1 ♂, Tully Falls National Park, 750 m, 2.vii.1971, Taylor and Feehan (ANIC); 1 ♂, Eacham National Park, 760 m, 1-7.x.1972, R. W. Taylor (ANIC); 1 ♀, Iron Range, 12.43S 143.48E, 15.vi.1971, Taylor and Feehan, rainforest, Berleseate ANIC 308 (ANIC).

*Discussion*.—Distinct by the darker colour and sparse coarse elytral punctures. The male vertex is barely impressed and tuberculate, and the female vertex only lightly impressed for a short distance antero-medial to the vertexal foveae. The head of the specimens from Tully Falls and Eacham National Parks are markedly densely punctate, but the male characters and genitalia are identical with the specimens from Cape Tribulation.

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